

Notice of Allowability

Application No.

09/648,164

Examiner

Thomas L Dickey

Applicant(s)

CHYAN ET AL.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment filed 11/05/2004.
2. ☒ The allowed claim(s) is/are 1-19.
3. ☒ The drawings filed on 16 July 2002 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

Minhloan Tran
Minhloan Tran
Primary Examiner
Art Unit 2826

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REASONS FOR ALLOWANCE

1. The following is an examiner's statement of reasons for allowance:

Claims 1-19 are allowed over the references of record for the following reasons:

A. Claims 1-14 are allowed over the references of record because none of these references disclosed or can be combined to yield the claimed invention such as an integrated circuit structure comprising a semiconductor layer having a major surface formed along a plane; first and second spaced-apart doped regions formed in the surface; a third doped region over the first region of different conductivity type than the first region; and a conductive layer formed between the first and second regions and above the plane, providing electrical connection between the doped regions, wherein the conductive layer comprises one or more materials taken from the group comprising tungsten silicide, tungsten nitride, titanium silicide, titanium nitride and cobalt silicide, as recited in claims 1 and 9, or further having the properties that the first and second spaced-apart doped regions extend into the surface from the plane and the third doped region of different conductivity type is monocrystalline, as recited in claim 1.

B. Claims 15-18 are allowed over the references of record because none of these references disclosed or can be combined to yield the claimed invention such as a semiconductor device comprising a first layer of semiconductor material; a first field effect transistor having a first source/drain region formed in the first layer, a channel region formed over the first layer and a second source/drain region formed over the channel

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region; a second field effect transistor having a first source/drain region formed in the first layer, a channel region formed over the first layer and a second source/drain region formed over the channel region; and a conductive layer in a plane extending between the first layer and the first field effect transistor channel region, said conductive layer comprising a metal positioned between the first source/drain region of each transistor to conduct current from one first source/drain region to the other first source/drain region, as recited in claim 15.

C. Claim 19 is allowed over the references of record because none of these references disclosed or can be combined to yield the claimed invention such as a semiconductor device comprising: a first layer of semiconductor material; a first field effect transistor having a first source/drain region formed in the first layer, a channel region formed over the first layer and a second source/drain region formed over the channel region; a second field effect transistor having a first source/drain region formed in the first layer, a channel region formed over the first layer and a second source/drain region formed over the channel region; and a conductive layer comprising a metal positioned between the first source/drain region of each transistor to conduct current from one first source/drain region to the other first source/drain region, wherein the conductive layer comprises a metal silicide.

2. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accom-

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pany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas L Dickey whose telephone number is 571-272-1913. The examiner can normally be reached on Monday-Thursday 8-6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan J Flynn can be reached on 703-308-6601. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TLD
11/2004